

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-004623**Date Inspected:** 15-Nov-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 2230**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 830**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Li Yan Hua**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Mike Hasler was present to observe the fitup, welding and related activities associated with the fabricating of Caltrans Orthotropic Box Girder (OBG) and Tower, for the San Francisco Oakland Bay Self Anchored Suspension Bridge, at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

Item	Description	WBS	Dwg No.	Status
1	PMT OBG	NA	NA	Welding and Macroetch S

Bay 1: Caltrans QA inspector monitored OBG Production Monitoring Test (PMT) #3, Gantry #2, deck panels DP125-001 and DP125-002. The magnetic particle test (MT) of the tack welds was performed by ZPMC QC/MT inspector, Mr. Xu Hai. The visual inspection of tack welds and root gap was performed by ABF, ZPMC and Caltrans. The ABF inspector is identified as Mr. Wang Zhen Hua and ZPMC QC/CWI inspector, Mr. Li Yan Hue. Caltrans QA inspector verified and documented the welding amperage, voltage and travel speed during the gas metal arc welding (GMAW) and submerged arc welding (SAW) process, welds 1 thru 6. At the completion of the GMAW root pass and SAW cover pass. The welds were visually inspected by ABF, ZPMC and Caltrans. Caltrans QA inspector witness ZPMC QC/UT inspector identified as Xue Hai Yong inspect the welds for depth of penetration and conformance. Caltrans QA inspector identified designated locations for macroetch sampling per contract requirements. The macroetch specimens were evaluated with a 7X optical lupe and accepted by ZPMC, ABF and Caltrans. See Caltrans U-ribs PMT Inspection Sheet, dated 11-16-2008 and ZPMC production monitoring test plate inspection report, dated 11-16-2008 for additional information.

PMT #1 & #2 were rejected by ZPMC after the welding of the SAW cover pass welds. Welds, number one (1) and two (2) was rejected by Mr. Li Yan Hue for lack of fusion at the weld toe joining the U-rib. ZPMC QA inspector, Mr.

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2	Chen Xi directed ZPMC to weld a replacement PMT identified as PMT #3. OBG Side Plate	NA	NA	QA-MT
Bay 4: Caltrans QA inspector performed magnetic particle test (MT) inspection per ZPMC notification of witness inspection, document number 001431. The subassemblies are identified as Side Plate SP467 and SP435; welds SP467-001-001, SP467-001-002, SP467-001-003, SP467-001-004, SP467-001-005, SP467-001-006, SP467-001-007, SP467-001-008, SP467-001-009, SP467-001-010 and SP435-001-001, SP435-001-002, SP435-001-003, SP435-001-004, SP435-001-005, SP435-001-006, SP435-001-007, SP435-001-008, SP435-001-009, SP435-001-010. QA inspector observed that the welds have been MT inspected and identified as accepted by ZPMC QC. Caltrans QA-MT coverage was approximately 10%. The welds appeared to be in conformance with the project specifications. See Caltrans Magnetic Particle Test Report (TL-6028) dated, November 15, 2008 for additional information.				

### Summary of Conversations:

As identified within the contents of this report.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Ady Velasco, 138-1694-2685, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Hasler,Mike	Quality Assurance Inspector
<b>Reviewed By:</b>	Cuellar,Robert	QA Reviewer

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